

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The Official Action sets forth an objection to Claims 2-5 under 37 C.F.R. § 1.75(c), based on the observation that these claims do not limit the subject matter of a previous claim. It appears there may be a misunderstanding regarding the subject matter recited in Claims 2-5.

Independent Claim 1 is generally directed to a packaging material for making paper containers comprising a thermoplastic material outermost layer, a paper substrate layer, a barrier layer and a thermoplastic material innermost layer. Claim 1 then goes on to recite that **the thermoplastic material innermost layer** contains at least a linear low density polyethylene possessing various characteristics. Claim 2 on the other hand recites that the **thermoplastic material outermost layer** contains at least a linear low density polyethylene possessing various characteristics. Claim 3 recites an **adhesives layer** between the barrier layer and the thermoplastic material innermost layer that contains at least a linear low density polyethylene possessing various characteristics. Claim 4 recites an **adhesive thermoplastic material layer** between the paper substrate layer and the barrier layer which contains at least a linear low density polyethylene. It is thus submitted that Claims 2-4 do further limit the subject matter of the claim from which they depend. If the undersigned has not properly understood the Examiner's concern here, the Examiner is kindly asked to contact the undersigned so that the undersigned will better appreciate the Examiner's concern.

With respect to Claim 5, the Examiner's observation that this claim does not further limit the subject matter of a previous claim is accurate. However, Claim 5 is an independent claim and thus, by definition, should not further limit the subject matter of a previous claim.

In light of the foregoing, withdrawal of the objection to Claims 2-5 based on 37 C.F.R. § 1.75(c) is respectfully requested.

The Official Action also sets forth a rejection of Claims 1-6 under 35 U.S.C. § 112, first paragraph. Here it is said that the specification does not provide enablement for the claim language reciting a linear low density polyethylene having a molecular weight distribution. The basis for this rejection is unclear. In one respect, the Official Action does not explain why one of ordinary skill in the art would be unable to make and use a linear low density polyethylene having a molecular weight distribution, particularly considering the common usage in the art of the term "molecular weight distribution." Also, it is noted that independent Claim 6 does not even recite that the linear low density polyethylene has a molecular weight distribution. In any event, to advance prosecution of this application so that the issues involving the prior art rejections can be considered on appeal, Claims 1-5 have been amended to delete the recitation of the molecular weight distribution. Accordingly, withdrawal of the claim rejection based on the first paragraph of 35 U.S.C. § 112 is respectfully requested.

The only other issues raised in the Official Action involve the same prior art rejections set forth in prior Official Actions. These rejections are traversed for reasons similar to those previously set forth.

That is, Claim 1 is directed to a packaging material for making paper containers having an interior, wherein the packaging material comprises at least a thermoplastic material outermost layer, a paper substrate layer, a barrier layer, and a thermoplastic material innermost layer. The thermoplastic material innermost layer contains at least a linear low density polyethylene having an average density of 0.900 g/ml - 0.915 g/mL, a peak melting point of 88 °C - 103 °C, a melt flow index of 5 dg/min. - 20 dg/min., a swelling ratio of 1.4 - 1.6, and a layer thickness of 20 - 50 micrometers.

Independent Claim 6 is directed to a paper packaging container formed from a packaging material comprising, in addition to other layers, an inside thermoplastic material layer containing at least a linear low density polyethylene and having a melt flow index of 5 dg/min. - 15 dg/min. and a swelling ratio of 1.45 - 1.55.

Independent Claim 5 is directed to a paper packaging container formed from a packaging material having the claimed values for average density, melt flow index and swelling ratio. This claim goes on to define a strip tape covering a discontinuous section of the thermoplastic material innermost layer between two edges of the packaging material in a liquid tight manner, and recites that at least the sealing-surface layer of the strip tape contains a linear low density polyethylene having the claimed values for average density, peak melting point, melt flow index, swelling ratio and thickness.

As has been explained previously, *Eckstein* discloses a multiple layer polymeric-based sheet structure having a heat sealable layer, a first adhesive layer, a barrier layer, a second adhesive layer, a layer of oriented polypropylene, and a polyethylene layer. The Official Action recognizes that *Eckstein* fails to disclose

packaging material including an innermost thermoplastic layer containing at least a linear low density polyethylene having an average density of 0.900 g/mL - 0.915 g/mL, a peak melting point of 88 °C to 103 °C, a melt flow index of 5 dg/min. - 20 dg/min., and a swelling ratio of 1.4 - 1.6, and takes the position that these deficiencies are remedied by the disclosure in *Gillespie et al.*

Gillespie et al. discloses a polyethylene composition adapted to be extrusion coated on substrates forming an extrusion coated polyethylene laminate. *Gillespie et al.* describes using polyethylene having a melt flow index of 1 dg/min. - 4 dg/min. at 190 °C, an annealed density of 0.92 g/cc - 0.93 g/cc, a peak melting point of 106.9 °C, and a swell ratio of 1.2 - 1.3.

The Official Action recognizes that *Gillespie et al.* does not disclose the claimed values for annealed density, melt flow index and swelling ratio, but concludes that it would have been obvious to one skilled in the art to arrive at the claimed values through routine experimentation and optimization of the values disclosed in *Gillespie et al.* In this regard, the disclosure in *Gillespie et al.* is said to “teach” the use of a polyethylene having certain claimed characteristics. However, the polyethylene disclosed in *Gillespie et al.* having the disclosed characteristics is a low density polyethylene (LDPE). This is to be contrasted with the subject matter recited in the independent claims defining that the thermoplastic material innermost layer or inside thermoplastic material layer contains a **linear low density polyethylene** (LLDPE). It is recognized that *Eckstein* discloses a multiple layer flexible sheet structure having a LLDPE layer. However, as the Official Action relies upon the disclosure in *Gillespie et al.* as setting forth a certain “teaching,” the “teaching” contained in *Gillespie et al.* must be considered as a whole and in its

entirety. In this context, what *Gillespie et al.* “teaches” is a **LDPE** layer having the disclosed values for annealed density, melt flow index and swelling ratio. Thus, if one were somehow motivated to employ the polyethylene disclosed in *Gillespie et al.* in connection with the multiple layer flexible sheet structure disclosed in *Eckstein*, one would utilize LDPE because that is what *Gillespie et al.* discloses. More specifically, *Gillespie et al.* does not “teach” using a LLDPE layer having the disclosed values for annealed density, melt flow index and swelling ratio. Thus, it is respectfully submitted that the rejection is improper because application of the disclosure in *Gillespie et al.* to the sheet structure disclosed in *Eckstein* would not have resulted in the subject matter recited in the independent claims.

Because the stated values for the melt flow index, swell ratio and annealed density described in *Gillespie et al.* are not in accord with the values recited in the independent claims, applying the disclosure in *Gillespie et al.* to the sheet structure disclosed in *Eckstein* would not have directed one to do that which is defined in the independent claims as the invention.

With specific regard to the claimed average density of 0.900 g/mL – 0.915 g/mL recited in independent Claims 1 and 5, the Official Action observes that *Gillespie et al.* describes an annealed density of less than 0.92 g/ml in lines 53-63 of column one. However, this reference to low density polyethylenes (LDPE) having an annealed density below 0.92 g/cc is set forth in the background portion of *Gillespie et al.* Here, *Gillespie et al.* merely notes that such low density polyethylenes can be heat sealed when formed as an extrusion coated polyethylene laminate at temperatures below 95°C. However, *Gillespie et al.* does not state that the low density polyethylene LDPE which is the subject of the patent should also have such

characteristics. Indeed, just the opposite is true. The fact that *Gillespie et al.* recognizes low density polyethylenes having an annealed density below 0.92 g/cc, yet specifically discloses that the polyethylene which is the subject of the patent should have an annealed density of 0.92 g/cc to 0.93 g/cc is a clear indication that *Gillespie et al.* does not envision using a low density polyethylene having an annealed density below 0.92 g/cc. *Gillespie et al.* recognized the availability of low density polyethylenes having an annealed less than 0.92 g/cc, yet chose not to use such a low density polyethylene, presumably because a LDPE having an annealed density below 0.92 g/cc would not provide the objectives sought to be achieved by *Gillespie et al.* Thus, the reference to an annealed density below 0.92 g/cc in the background portion of *Gillespie et al.* not only does not support the position set forth in the Official Action, it contradicts such position.

With additional regard to Claim 5, the Official Action notes that *Ikenoya et al.* discloses a strip tape covering a section of the innermost layer of a container. However, nowhere does *Ikenoya et al.* state that such strip layer possess the claimed average density, peak melting point, melt flow index, swelling ratio and layer thickness recited in Claim 5. In fact, *Ikenoya et al.* does not even disclose that a surface layer of the strip tape contains a linear low density polyethylene as set forth in Claim 5. Quite the contrary, the discussion in lines 35-40 of column 5 of *Ikenoya et al.* describes that the strip tape 25 is composed of a layer of a modified polyester, an adhesive layer, a layer of a stretched polyester, an adhesive layer, and a layer of a modified polyester. Thus, if one were somehow motivated to utilize the strip tape described in *Ikenoya et al.* in the modified sheet structure disclosed in *Eckstein*, the result would not be the claimed combination set forth in independent claim 5.

For at least the foregoing reasons, it is respectfully submitted that even if one were somehow motivated to modify the modified sheet structure disclosed in *Eckstein* to include a strip tape as described in *Ikenoya et al.*, the result would not be that which is defined in independent Claim 5.

Dependent Claims 2-4 are allowable at least because they depend from allowable Claim 1. New Claims 7-9 have also been added and recite that the thermoplastic material innermost layer/inside thermoplastic material layer is extrusion laminated. As noted above, *Gillespie et al.* specifically states that values for the melt index, swell ratio and annealed density that are outside the values discussed in *Gillespie et al.* would not permit the material to be extrusion coated.

Withdrawal of the rejections of record and allowance of this application are respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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